



**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference   | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)   |  |
| International application No.<br>PCT/EP 03/10731  | International filing date (day/month/year)<br>26.09.2003   | Priority date (day/month/year)<br>26.09.2002 |
| International Patent Classification (IPC) or both national classification and IPC<br>G07B17/00  |  |  |
| Applicant<br>NEOPOST INDUSTRIE SA   |  |  |
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 11 sheets.</p>   |  |  |
| <p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p> |  |  |
| Date of submission of the demand<br><br>26.04.2004  | Date of completion of this report<br><br>09.02.2005  |  |
| Name and mailing address of the international preliminary examining authority:<br><br> European Patent Office - P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk - Pays Bas<br>Tel. +31 70 340 - 2040 Tx: 31 651 epo nl<br>Fax: +31 70 340 - 3016   | Authorized Officer<br><br>Reule, D<br><br>Telephone No. +31 70 340-3868<br><br> |  |

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/10731

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-40 as originally filed

**Claims, Numbers**

1-33, 34 (part), 41-64 received on 08.01.2005 with letter of 04.01.2005  
34 (part), 35-40 filed with telefax on 26.01.2005

**Drawings, Sheets**

1/22-22/22 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

|                               |             |      |
|-------------------------------|-------------|------|
| Novelty (N)                   | Yes: Claims | 1-64 |
|                               | No: Claims  |      |
| Inventive step (IS)           | Yes: Claims | 1-64 |
|                               | No: Claims  |      |
| Industrial applicability (IA) | Yes: Claims | 1-64 |
|                               | No: Claims  |      |

2. Citations and explanations

**see separate sheet**

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International application No. PCT/EP 03/10731

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

D1: US-A-5 898 153 - 27 April 1999  
D2: GB-A-2 174 039 - 29 October 1986  
Do: US-A-5 495 981 - 5 March 1996  
D4: US 2002/087493 A1 - 4 July 2002  
D5: US-A-4 445 635 - 1 May 1984

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The present International Application meets the requirements given by the PCT, because the subject-matter of claims 1-64 appears to be new, to involve an inventive step, and to be industrially applicable in the sense of Article 33(1)-(4) PCT.

Document D4 is regarded as being the closest prior art to the subject matter of claim 1 and shows a mail preparation system for the preparation of a series of mail items in which postal indicia are printed on the mail items. When a mail item is spoiled or damaged this spoiled item will be withdrawn from the mail stream. As a postage charge has been accounted for this spoiled mail item by the postage meter, a determination is made whether the indicium that was created for the spoiled item can be used for a subsequent item. If so, a substitute indicium is created. The substitute indicium is a modification of the unused indicium and contains an indication that it is a substitute indicium (cf. D4; abstract, claim, paragraphs [0002]-[0012], [0037]).

The subject-matter of claim 1 differs from this known D4 in that each item contains two parts: an element with an authentication code and sensitive information. When an item is spoiled the element bearing the authentication code is presented either for refund or reuse to a third party, such that the sensitive information is not made available to that third party.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

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The problem to be solved by the present invention may be regarded as how a value that was applied on spoiled items and for which the user was charged can be refunded (or reused) in a simpler manner.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) as none of the prior art documents, either alone or in combination with any prior knowledge, mentions that only the element which bears the authentication code, and thus the value information, is presented either for refund or reuse (of the identical element) to a third party, such that the sensitive information is not made available to that third party.

Independent claim 34 refers to a corresponding system with essentially the same features and is therefore also considered as being new and inventive (Article 33(2)(3) PCT).

Claims 2 to 33 and 35 to 64 are dependent on claim 1 and 34 respectively, and as such also meet the requirements of the PCT with respect to novelty and inventive step.

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**CLAIMS**

1. A method of refunding or reusing value as applied to spoiled items, including an element containing an authentication code and bearing sensitive information, in an item stream, the method comprising the steps of:  
validating the element on each item in an item stream, wherein an item is assigned as being spoiled where the element does not satisfy at least one validation criterion;  
separating spoiled items from the item stream;  
for each spoiled item, presenting the element to a third party, such that the sensitive information is not made available to the third party;  
and  
for each spoiled item, refunding or reusing the value as applied to the spoiled item.
2. The method of claim 1, wherein each item is scanned for an element in the validation step.
3. The method of claim 2, wherein the at least one validation criterion requires the element to have at least one physical characteristic, preferably comprising at least one of a position, size and color of the element.
4. The method of any of claims 1 to 3, wherein data is read from each element in the validation step.
5. The method of claim 4, wherein the at least one validation criterion requires authentication of at least part of the read data.
6. The method of claim 5, wherein the authentication of at least part of the read data requires the at least part of the read data to have a predeterminable format.

7. The method of claim 5, wherein the authentication of at least part of the read data requires the at least part of the read data to match check data.
8. The method of any of claims 1 to 7, wherein the element is a printed imprint, preferably a two-dimensional barcode.
9. The method of any of claims 1 to 7, wherein the element is an electronic label, preferably a radio frequency tag.
10. The method of any of claims 1 to 9, wherein the sensitive information is printed on the items.
11. The method of any of claims 1 to 9, wherein the items include an electronic label containing the sensitive information, preferably a radio frequency tag.
12. The method of any of claims 1 to 11, further comprising the steps of:  
perforating each spoiled item about the element; and  
separating a section of the item including the element and excluding the sensitive information, such as to allow the section to be presented to a third party, with the sensitive information not being made available to the third party.
13. The method of any of claims 1 to 11, wherein each item is perforated about a section including the element, and further comprising the step of:  
separating the section of the item including the element and excluding the sensitive information, such as to allow the section to be presented to a third party, with the sensitive information not being made available to the third party.

14. The method of any of claims 1 to 11, wherein the element is removable from the item, and further comprising the step of:  
separating the element, such as to allow the element to be presented to a third party, with the sensitive information not being made available to the third party.
15. The method of any of claims 1 to 11, wherein each item includes a label on which the element is provided, and further comprising the step of:  
separating the label, such as to allow the label to be presented to a third party, with the sensitive information not being made available to the third party.
16. The method of any of claims 1 to 11, further comprising the step of:  
obliterating the sensitive information on each spoiled item, such as to allow the item to be presented to a third party, with the sensitive information not being made available to the third party.
17. The method of claim 16 when appendant upon claim 10, wherein the obliterating step comprises the step of:  
over-printing the sensitive information, such as to render the sensitive information unreadable.
18. The method of claim 16 when appendant upon claim 10, wherein the obliterating step comprises the step of:  
applying a panel over the sensitive information, such as to render the sensitive information unreadable.
19. The method of claim 16, wherein the obliterating step comprises the step of:  
cutting out a section of each spoiled item including the sensitive information, such that the item includes no sensitive information.



20. The method of any of claims 1 to 11, further comprising the step of:  
packaging each spoiled item, such as to conceal the sensitive information and allow the item to be presented to a third party, with the sensitive information not being made available to the third party.
21. The method of any of claims 1 to 11, wherein each item includes a cover sheet which includes no sensitive information and on which the element is provided, and further comprising the step of:  
separating the cover sheet including the element from the item, such as to allow the cover sheet to be presented to a third party, with the sensitive information not being made available to the third party.
22. The method of any of claims 1 to 21, further comprising the step of:  
generating a spoiled item notification in respect of each spoiled item for communication to a remote center.
23. The method of claim 22, further comprising the step of:  
electronically transmitting the spoiled item notifications to the remote center, and preferably each spoiled item notification is transmitted separately or spoiled item notifications are transmitted in batches at predeterminable intervals.
24. The method of claim 22 or 23, wherein an image of each spoiled element is acquired in the validation step, and each spoiled item notification includes an image of the respective spoiled element which excludes the sensitive information, such as to allow the image of the element to be presented to a third party, with the sensitive information not being made available to the third party.
25. The method of any of claims 1 to 24, further comprising the step of:  
crediting a refund credit register in respect of the value as applied to each spoiled item.

26. The method of any of claims 1 to 24, further comprising the step of:  
reusing the authentication code contained in the element of each  
spoiled item.
27. The method of claim 26, further comprising the step of:  
writing an element on each item, wherein, where the element of a  
previous item is assigned as being spoiled, the written element  
contains the authentication code contained in the element of the  
previous item assigned as being spoiled.
28. The method of claim 27 when appendant upon claim 8, wherein the  
writing step comprises the step of:  
printing an imprint as an element on each item.
29. The method of claim 27 when appendant upon claim 9, wherein the  
writing step comprises the step of:  
electronically writing to an electronic label as an element on each  
item.
30. The method of any of claims 1 to 29, wherein the items comprise  
documents, preferably comprising one or more sheets.
31. The method of claim 30, wherein the documents comprise mail  
documents.
32. The method of any of claims 1 to 29, wherein the items comprise  
document carriers, preferably envelopes or mail carriers.
33. The method of any of claims 1 to 32, wherein the sensitive  
information is encoded.
34. An item handling system for refunding or reusing value as applied to  
items, including an element containing an authentication code and

bearing sensitive information, in an item stream, the system comprising:

a validation unit for validating the element on each item in an item stream, wherein an item is assigned as being spoiled where the element does not satisfy at least one validation criterion;

a sorting unit for separating spoiled items from the item stream; and

a control unit for controlling operation of the system, wherein the control unit includes a refund credit register and is operative to credit the refund credit register in respect of the value as applied to each spoiled item, or is operative to provide for reuse of the authentication code contained in the element of each spoiled item.

35. The system of claim 34, wherein the validation unit is operative to scan each item for an element.
36. The system of claim 35, wherein the at least one validation criterion requires the element to have at least one physical characteristic, preferably comprising at least one of a position, size and color of the element.
37. The system of any of claims 34 to 36, wherein the validation unit is operative to read data from the element.
38. The system of claim 37, wherein the at least one validation criterion requires authentication of at least part of the read data.
39. The system of claim 38, wherein the authentication of at least part of the read data requires the at least part of the read data to have a predeterminable format.
40. The system of claim 38, wherein the authentication of at least part of the read data requires the at least part of the read data to match check data.

41. The system of any of claims 34 to 40, wherein the element is a printed imprint, preferably a two-dimensional barcode.
42. The system of any of claims 34 to 40, wherein the element is an electronic label, preferably a radio frequency tag.
43. The system of any of claims 34 to 42, wherein the sensitive information is printed on the items.
44. The system of any of claims 34 to 42, wherein the items include an electronic label containing the sensitive information, preferably a radio frequency tag.
45. The system of any of claims 34 to 44, further comprising:  
a perforating unit for perforating each spoiled item about the element, such as to allow a section of the item including the element and excluding the sensitive information to be separated, and thereby allow the section to be presented to a third party, with the sensitive information not being made available to the third party.
46. The system of any of claims 34 to 44, wherein each item is perforated about a section including the element, such as to allow the section of the item including the element and excluding the sensitive information to be separated, and thereby allow the section to be presented to a third party, with the sensitive information not being made available to the third party.
47. The system of any of claims 34 to 44, wherein the element is removable from the item, such as to allow the element to be separated, and thereby allow the element to be presented to a third party, with the sensitive information not being made available to the third party.

48. The system of any of claims 34 to 44, wherein each item includes a label on which the element is provided, such as to allow the element to be separated by removal of the label, and thereby allow the label to be presented to a third party, with the sensitive information not being made available to the third party.
49. The system of any of claims 34 to 44, further comprising:  
an obliteration unit for obliterating the sensitive information on each spoiled item, such as to allow the item to be presented to a third party, with the sensitive information not being made available to the third party.
50. The system of claim 49 when appendant upon claim 43, wherein the obliteration unit comprises a printer for over-printing the sensitive information, such as to render the sensitive information unreadable.
51. The system of claim 49 when appendant upon claim 43, wherein the obliteration unit comprises an applicator for applying a panel over the sensitive information, such as to render the sensitive information unreadable.
52. The system of claim 49, wherein the obliteration unit comprises a cutter for cutting out a section of each spoiled item including the sensitive information, such that the item includes no sensitive information.
53. The system of any of claims 34 to 44, further comprising:  
a packaging unit for packaging each spoiled item, such as to conceal the sensitive information, and thereby allow the item to be presented to a third party, with the sensitive information not being made available to the third party.

54. The system of any of claims 34 to 44, wherein each item includes a cover sheet which includes no sensitive information and on which the element is provided, such as to allow the cover sheet including the element to be separated from the item, and thereby allow the cover sheet to be presented to a third party, with the sensitive information not being made available to the third party.
55. The system of any of claims 34 to 54, wherein the control unit is operative to generate a spoiled item notification in respect of each spoiled item for communication to a remote center.
56. The system of claim 55, wherein the control unit includes a communications module for electronically communicating with the remote center, whereby the spoiled item notifications are transmitted electronically to the remote center, and preferably each spoiled item notification is transmitted separately or spoiled item notifications are transmitted in batches at predeterminable intervals.
57. The system of claim 55 or 56, wherein the validation unit is operative to acquire an image of each spoiled element, and each spoiled item notification includes an image of the respective spoiled element which excludes the sensitive information, such as to allow the image of the element to be presented to a third party, with the sensitive information not being made available to the third party.
58. The system of any of claims 34 to 57, further comprising:  
a writing unit for writing an element on each item; and  
wherein the control unit is operative to control the writing unit to write an element containing the authentication code contained in the element of a previous item assigned as being spoiled.

59. The system of claim 58 when appendant upon claim 41, wherein the writing unit comprises a printing unit for printing an imprint as an element on each item.
  60. The system of claim 58 when appendant upon claim 42, wherein the writing unit comprises an electronic label writer for writing to an electronic label as an element on each item.
  61. The system of any of claims 34 to 60, wherein the items comprise documents, preferably one or more sheets.
  62. The system of claim 61, wherein the documents comprise mail documents.
  63. The system of any of claims 34 to 60, wherein the items comprise document carriers, preferably envelopes or mail carriers.
  64. The system of any of claims 34 to 63, wherein the sensitive information is encoded.
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bearing sensitive information, in an item stream, the system comprising:

a validation unit for validating the element on each item in an item stream, wherein an item is assigned as being spoiled where the element does not satisfy at least one validation criterion;

a sorting unit for separating spoiled items from the item stream, with the element of each spoiled item being presented to a third party, such that the sensitive information is not made available to the third party; and

a control unit for controlling operation of the system, wherein the control unit includes a refund credit register and is operative to credit the refund credit register in respect of the value as applied to each spoiled item, or is operative to provide for reuse of the authentication code contained in the element of each spoiled item.

35. The system of claim 34, wherein the validation unit is operative to scan each item for an element.
36. The system of claim 35, wherein the at least one validation criterion requires the element to have at least one physical characteristic, preferably comprising at least one of a position, size and color of the element.
37. The system of any of claims 34 to 36, wherein the validation unit is operative to read data from the element.
38. The system of claim 37, wherein the at least one validation criterion requires authentication of at least part of the read data.
39. The system of claim 38, wherein the authentication of at least part of the read data requires the at least part of the read data to have a predeterminable format.
40. The system of claim 38, wherein the authentication of at least part of the read data requires the at least part of the read data to match check data.